

Arcadis UK

80 Fenchurch Street

London

[arcadis.com](https://www.arcadis.com)

Dear Kent County Council,

Please see below responses to questions and recommendations received by Arcadis in 2024 as part of the Bean Tunnel Planning Application.

1 Query No. 1

provide any confirmation as to whether the various landowners would actually be agreeable to entering into a legal agreement, for the purposes of BNG with associated commitments for habitat monitoring and maintenance for at least a 30 year period of time. Is there anything in writing from them at this stage that indicates they would in principle agree?

1.1 Arcadis response to query No. 1

- Discussions with Bluewater (landowner) have taken place previously regarding proposed habitat creation/enhancement on their land for the purposes of BNG. They are aware of the management commitments over a 30-year period. A letter will follow shortly, confirming Bluewater's acceptance of entering into a Section 106 leal Agreement for the delivery and management of the BNG areas located on its land.

2 Query No. 2

if KCC does own any of the land where the onsite BNG areas are proposed, what % of the BNG gain would that represent?

2.1 Arcadis response to query No. 2

- KCC own a small area within the northeastern corner of the red line boundary which encompasses approximately 50m² of mixed scrub habitat, out of a larger area of scrub of approximately 1500m² within the entire site.
- At the time of site survey and condition assessment, the whole area of scrub was valued as poor-quality mixed scrub including that within the area owned by KCC.
- The 50m² area that KCC own will not be removed and is worth 0.20 habitat units in its current condition.
- The patch will be enhanced from poor to good quality over time with management and increase to 0.55 habitat units.
- This will result in a 175% gain in habitat units for that patch of habitat, however as it is such a small area compared to the wider site, it only contributes 0.14% to BNG which currently sits at 14.48%. Therefore, if we were to exclude this area (i.e., not enhance it) then BNG would be 14.34%.

3 Query No. 3

The EAS have concerns that the wildflower grassland enhancement/creation may not be achievable within the site or wider Bluewater site if the required management can't be carried out. For example, Grass verges within the east of Bluewater will be enhanced but the information within the report suggests that these areas will be managed as long grassland – this may not be possible as they are located within roadside verges. It is advised that within the submission of the Biodiversity Gain Plan details of the management must be provided with confirmation that the site manager will manage the land as detailed.

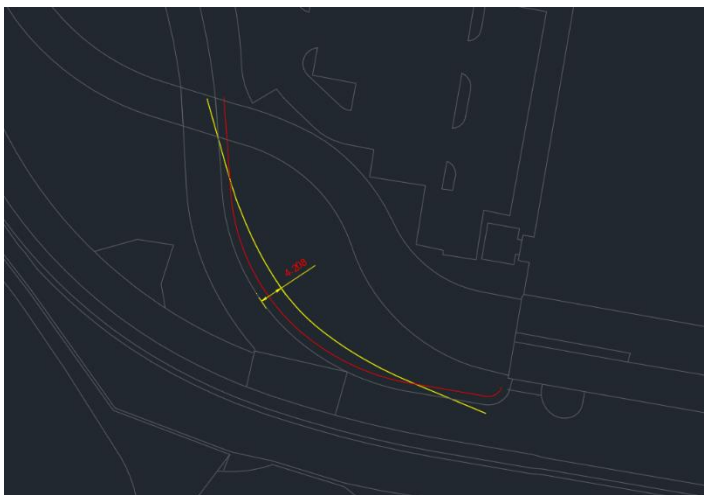
If this is not possible an alternative way to achieve BNG on site would be to carry out management of the woodland within/adjacent to the site to improve the condition from poor to moderate.

The EAS highlight that if planning permission is granted, due to the need to carry out off site BNG there will be a need for a legal agreement to be secured and details of the offsite BNG to be uploaded on to the BNG register.

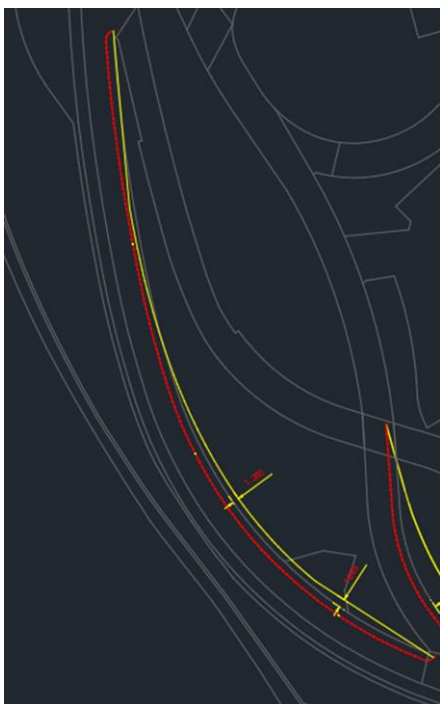
3.1 Arcadis response to query No. 3

- There are several areas within the Bluewater site where grassland management is currently being undertaken by the landscape contractor to provide wildflower meadow on road side verges. The optioneering process of identifying the areas for enhancement involved a feasibility assessment which confirmed suitability to provide such habitat in these areas.
- In terms of wildflower enhancement in relation to visual effects on road user safety, an assessment of visibility splays has confirmed that planting on the grassed verges highway safety guidance as long as we provide an area void of planting within the road/grass interface. The assessment was based upon a 30mph speed limit which is as per Manual for Streets 2007, and results in a stopping sight distance (SSD) of 43m. The previous boundary provided a 1.5m buffer area, however the assessment requires slightly more of a buffer along the road/verge interface (in yellow) as seen below:

Area 10



Area 11



Area 12



- The landscape plans will be resubmitted with the new buffer with respect to the highways assessment.
- The reduction in amount of grassland to be enhanced still provides a positive BNG score of greater than 10%.

4 Query No. 4

Bats may be impacted by an increase in lighting during the construction period. Regarding lighting the tunnel, the ecological impact assessment has detailed the following:

For lighting required in Tunnel 2 for pedestrian and light plant use, it is proposed that motion sensor lighting or a timer is used to minimise potential impact to bats. This type of lighting would be activated via motion and turn off after a short period of time of inactivity. Motion activated sensors could be installed at set intervals throughout the tunnel and be lit at levels no greater than 5 lux. Regarding the colour of lighting used, there is evidence to suggest common pipistrelle species are unaffected by white light, however it is recommended that headlights utilised on-site have a red-light setting which can be used if required. External lighting design for Tunnel 2 will should be consulted with the ecologist in order to mitigate the effects of lighting on the tunnels and the surrounding habitat

The EAS questions if either of these two options are achievable within a construction site. EAS understand that the tunnel is to be used by both pedestrians and vehicles and therefore there will be minimum requirements to ensure that there is no risk of accidents occurring within the site. It may be more practical for a low-level lighting to be operational constantly during the working hours which will then increase in brightness when the motion sensors are triggered. If motion sensors are triggered the timings must be based on the maximum time it takes for a pedestrian to walk through the tunnel. Any lighting in the tunnel must only be operational during the working construction hours.

Please can you provide further information to clarify the proposed construction lighting arrangements. Would the proposed lighting only be operated during the working construction hours and how would the motion sensors and timers be used in practice during the construction period.

4.1 Arcadis response to query No. 4

See Bean Tunnel Technical Note – Lighting – DFL. In addition to clarifications provided in the technical note, the below construction lighting guidance is required in respect to bat mitigation.

The recommendations within the original EcIA will be amended in line with the Bean Tunnel Lighting Design Report to ensure lighting during the construction phase will follow industry standard best practice (BS 5489-2:2016, BS 5489-1:2020 and BS EN 12464-2:2024) during working hours for the purposes of health and safety as detailed within the technical note. Although the lighting design has not changed since the previous consented works in 2021, the design also satisfies guidance set out in the new lighting guidance for bats (ILP 2023).

The proposed construction lighting design also coincides with construction lighting guidance in the previously consented works (Natural England Licence 2021-51011-EPS-MIT-1).

The below temporary measures will be required prior to construction for bat mitigation:

- Lighting within Tunnel 2 will be installed and operational outside of the bat sensitive season (i.e., either in September/October or March/April) under a bat licence from Natural England.
- A temporary close board timber fence will be installed immediately south of Tunnel 2 (on the western side) prior to construction starting to shield against light spill during construction.
- Under a derogation licence, bats will be excluded from potential roosting features (PRFs) and roosts immediately prior to works starting.

Additional new roosting features within Tunnel 1 (southern tunnel) will be installed to compensate for the loss of PRFs/roosts within Tunnel 2 (northern tunnel).

The below lighting requirements will be followed on site during construction:

- Lighting within the tunnel will be switched to motion sensitive outside of working hours (i.e., during night or dark hours that fall beyond working hours).
- During darker winter months, when working hours overlap with sunrise/sunset, lighting will remain switched on in the tunnels during construction working hours. On the exterior face on the tunnel low level lighting/ directional down lighting will be used at the entrance during construction hours.

5 Query No. 5

A clear plan has not been submitted demonstrating the anticipated horizontal and vertical light spill of the proposal. The light spill report does provide some plans which show the existing and anticipated operational lighting when it is switched off and on however the plans are not clear. We recommend that a more detailed plan, showing the existing and anticipated lighting levels (both horizontal and vertical light levels) are provided to ensure the impact of the proposed lighting can be understood.

Please provide information to confirm the operational hours of the proposal and if there will be periods when the lights are switched off or dimmed.

5.1 Arcadis response to query No. 5

See Bean Tunnel Technical Note – Lighting – DFL. In addition to clarifications provided in the technical note, the below operational lighting guidance is required in respect to bat mitigation.

Following a review of previously consented lighting design against updated guidance from the Institution of Lighting Professionals 2023, the design is still consistent with best practice Bats and Artificial Lighting At Night (Guidance Note 08/23). The lighting during operation will follow the below previously approved guidance granted in the Natural England licence (2021-51011-EPS-MIT-1) as shown below:

- *"The lighting design shall ensure that light levels at the western and eastern entrances of tunnel one and tunnel two shall not exceed 0.2 lux levels on the horizontal plane and 0.5 lux levels on the vertical plane.*
- *The lighting design shall ensure that light levels on retained habitat (reed beds, open water, scattered trees and shrubs) outside the entrance of Tunnel 2 and south of Tunnel 2 shall not exceed 0.2 lux levels on the horizontal plane and 0.5 lux levels on the vertical plane.*
- *All column mounted luminaires installed and managed within the redline boundary shall be dimmed to 50% output between midnight and 6am.*
- *The functional and feature lighting of the tunnel must be dimmed to 30% output between dusk and dawn.*
- *The two new column mounted luminaires lighting at the junction must have a spectrum of $\leq 3000k$ and peak wavelengths higher than 550nm.*
- *The column mounted luminaires should also incorporate internal cut off louvres and external rear outreach brackets to reduce rear light spill".*

6 Query No. 6

BNG, including how it would be proposed to be secured

You may find it helpful to refer to the proposed revisions to our Local List, which is yet to be adopted. This went to Planning Applications Committee on the 20 March this year, and the papers can be viewed on the County Councils web site. This link should take you to the relevant pages

<https://democracy.kent.gov.uk/ieListDocuments.aspx?CId=138&MId=9340&Ver=4> . Subject to adoption, in

the future we would wish to see the information in the section 4.2 relating to a draft biodiversity gain plan and draft heads of terms for a legal agreement securing the gains, in an application such as this.

In determining the application, the planning authority will need to consider, where relevant, whether the biodiversity gain condition is capable of being discharged successfully. (see section 6.5 of the proposed revisions to our Local List).

Therefore, it would be helpful if you could provide further details to explain the proposed approach to securing the proposed BNG arrangements, and any potential planning obligations or legal agreements that may be required, including with respect to the offsite BNG and the BNG register. From an earlier email I know that you are working on this.

There is information within section 4.2.3 of the proposed revisions to our Local List about what a draft Biodiversity Gain Plan should include. There is also information within section 4.2.4, about where a legal agreement is required, it will need to be agreed and completed prior to the commencement of any development granted permission (alongside formal approval of the required Biodiversity Gain Plan).

DEFRA publish information about BNG Plan templates and Legal Agreements, and there is further information within planning practice guidance [Biodiversity net gain - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/biodiversity-net-gain)

Whilst it is understood that the application already contains some of the information which would be expected to be included in a draft biodiversity gain plan, such as within the BNG report and within the matrix, it would still be helpful to receive a draft biodiversity gain plan as part of the application, as a this would consolidate this information. As you will be aware, if permission is granted a Biodiversity Gain Plan would be required to be submitted and approved by the statutory framework before the development could commence.

There is a standard Biodiversity Gain Plan template [Biodiversity gain plan - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/biodiversity-gain-plan) available to complete and whilst this is not a mandatory template, you may wish to use this for your draft.

It would also be helpful at this stage to receive the further details of how it is proposed that the gains would be secured, including any draft heads of terms for any legal agreement being proposed and clearly setting out potential obligations required to secure the biodiversity gains, should permission be granted. These should include implementation, management, maintenance, and monitoring of the habitat(s) for at least 30 years and details of who you intend would be party to any legal agreement.

6.1 Arcadis response to query No. 6

The applicant has submitted all relevant documentation required for an application relating to Statutory BNG. Further documentation including the BNG plan will be submitted following planning approval and agreed during the Section 106 Agreement stages. Until then and in line with national requirements, a draft proposed management plan have been provided within Appendix F of the BNG report which identifies the management and planting mix used for various proposed habitats.

Discussions with Bluewater (landowner) have taken place previously regarding proposed habitat creation/enhancement on their land for the purposes of BNG. They are aware of the management commitments over a 30-year period. A letter will follow shortly, confirming Bluewater's acceptance of entering into a Section 106 leal Agreement for the delivery and management of the BNG areas located on its land.